

INFORMATION DISCLOSURE  
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Atty. Docket No.

Serial No.

**117-457**

Applicant

**Div. of Serial No. 117-315****SCHOFIELD, et al.**

Filing Date

Group

**July 7, 2003****Unassigned**

## FOREIGN PATENT DOCUMENTS

TRANSLATION

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
0 307 171	15/3/89	EP				
0 317 096 A	24/5/89	EP				
97 20053 A	5/6/97	WO				

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)

	ROACH PL ET AL: "Crystal structure of isopenicillin N synthase is the first from a new structural family of enzymes." NATURE 375 (6533) P700-4 JUN 22 1995, XP002059796 cited in the application see abstract; figures 1-3; table 1
	SCOTT RA ET AL: "X-ray absorption spectroscopic studies of the high-spin iron (II) active site of isopenicillin N synthase: evidence for Fe-S interaction in the enzyme-substrate complex." BIOCHEMISTRY 31 (19) P4596-601 MAY 19 1992, XP002067783 see whole document
	ORVILLE, ALLEN M. ET AL: "Thiolate ligation of the active site iron (II) of isopenicillin N synthase derives from substrate rather than endogenous cysteine: spectroscopic studies of site-specific Cys. Fwdarw., Ser mutated enzymes" BIOCHEMISTRY (1992), 31 (19), 4602-12 CODEN: BICHAW; ISSN: 006-2960, XP002067784 see the whole document
	BLACKBURN JM ET AL: "A heuristic approach to the analysis of enzymic catalysis reaction of delta-(L-alpha-amino adipoyl)-L-cysteinyl-D - alpha-aminobutyrate and delta-(L-alpha-amino adipoyl)-L-cysteinyl-D-allylglycine catalyzed by isopenicillin N synthase isozymes." BIOCHEMISTRY, JUN 6 1995, 34 (22) P7548-62, UNITED STATES, XP002067785 see whole document
	HUFFMAN GW ET AL: "Substrate specificity of isopenicillin N synthase." J MED CHEM, MAY 15 1992, 35 (10) P1897-914, UNITED STATES, XP002067786 see whole document
	DATABASE BIOTECHNOLOGY ABSTRACTS DERWENT, LONDON An 88-01715, PRATT A J: "Manipulation of beta-lactam biosynthetic enzymes" XP002067788 see abstract
	TAN, DOREEN S. H. ET AL: "Functional analysis of conserved histidine residues in Cephalosporium acremonium isopenicillin N synthase by site-directed mutagenesis" J. BIOL. CHEM. (1996), 271(2), 889-94 CODEN: JBCHA3; ISSN: 0021-9258, XP002060004 see abstract see page 889, right-hand column, paragraph 2; figures 1, 4; tables 2, 3 see page 893, left-hand column, paragraph 2
	KRIAUCIUNAS A ET AL: "The functional role of cysteines in isopenicillin N synthase. Correlation of cysteine reactivities toward sulfhydryl reagents with kinetic properties of cysteine mutants." J. BIOL. CHEM, JUN 25 1991, 266 (18) P11779-88, UNITED STATES, XP002060005 see abstract see page 11780, left-hand column, paragraph 3, see page 11782, right-hand column, line 12 - line 17
	SAMI, MALKIT ET AL: "Glutamine-330 is not essential for activity in isopenicillin N synthase from Aspergillus nidulans" FEBS LETT. (1997), 405(2), 191-194 CODEN: FEBLAS; ISSN: 0014-5793, XP002059797 see whole document
	BARTON ET AL., A strategy for the rapid multiple alignment of protein sequences, J. Molecular Biology (1987), Vol. 198, Pgs. 327-337
	GARCIA-DOMINQUEZ ET AL., "Cloning and Characterization of the IPNS Gene of Strep. Griseus NRRL 3851 and Studies of Expression and Complementation of the Cephamycin Pathway in Strep. Clavuligerus", Antimic. Agents Chemother., Vol. 35, No. 1, January 1991

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.